

What is claimed is:

1. A liquid crystal display panel including a liquid crystal layer sandwiched between transparent first and second substrates, and a plurality of 5 segment electrodes on said first substrate and an opposite electrode on said second substrate respectively, and performing a display by a change in a state of transmission, scattering or absorption of light which is made incident on said liquid crystal layer, caused by selectively applying voltage to said liquid crystal layer by means of said segment electrodes and said opposite electrode, 10 wherein an auxiliary electrode is provided around said each segment electrode on said first substrate with a slight gap intervening between said segment electrode and said auxiliary electrode, said auxiliary electrode is formed of same transparent conductive film as that of said segment electrodes, and 15 wherein an overlap between said opposite electrode and said segment electrode forms a pixel area, and an overlap between said opposite electrode and said auxiliary electrode forms a background area.

2. A liquid crystal display panel according to claim 1, 20 wherein a plurality of segment electrode terminals for individually applying external signals to said plurality of segment electrodes, and wiring electrodes for connecting said segment electrode terminals and said segment electrodes respectively are provided on said first substrate, and 25 wherein said auxiliary electrode is provided with a slight gap intervening also between said auxiliary electrode and said wiring electrode, said auxiliary electrode, said segment electrodes and said wiring electrodes are formed of same transparent conductive film, and overlaps between said

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~~opposite electrode and said wiring electrodes also form said background area.~~

3. A liquid crystal display panel according to claim 2,  
wherein the gap between said wiring electrode and said auxiliary  
electrode on said first substrate is smaller than the gap between said segment  
electrode and said auxiliary electrode.

4. A liquid crystal display panel according to claim 3,  
wherein at least a portion of said wiring electrode with a gap formed  
between said wiring electrode and said auxiliary electrode is a thin wire  
electrode portion having a width that is same as or smaller than that of the  
gap.

5. A liquid crystal display panel according to claim 4,  
wherein said wiring electrode outside an outer periphery of said  
background area is a thick wire electrode portion having a width larger than  
that of said thin wire electrode portion.

6. A liquid crystal display panel according to claim 5,  
wherein a portion of an outer peripheral portion of said auxiliary  
electrode close to said thin wire electrode portion protrudes to be close to  
said thick wire electrode portion of said wiring electrode to form a gap  
between the protruding portion and said thick wire electrode portion, which  
is smaller than a gap between the protruding portion and said thin wire  
electrode portion.

7. A liquid crystal display panel according to claim 6,  
wherein said thick wire electrode portion of said wiring electrode has  
a connection side portion for connecting said thin wire electrode portion and  
said segment electrode terminal and an extending portion extending to the  
opposite side to the portion, and a gap between the protruding portion of said

auxiliary electrode and said extending portion is smaller than a gap between the protruding portion of said auxiliary electrode and said connection side portion.

8. A liquid crystal display panel including a liquid crystal layer  
5 sandwiched between transparent first and second substrates, and a plurality of segment electrodes on said first substrate and an opposite electrode on said second substrate respectively, and performing a display by a change in a state of transmission, scattering or absorption of light which is made incident on said liquid crystal layer, caused by selectively applying voltage to said liquid crystal layer by means of said segment electrodes and said opposite electrode,  
10 wherein an auxiliary electrode made of a transparent conductive film is provided between said each segment electrode and around said segment electrodes on said first substrate to overlap peripheral portions of said segment electrodes, and said auxiliary electrode is electrically insulated from said each segment electrode by a transparent insulating film which is provided between said auxiliary electrode and said segment electrode, and  
15 wherein an overlap between said opposite electrode and said segment electrode forms a pixel area, and an overlap between said opposite electrode and said auxiliary electrode forms a background area.  
20 9. A liquid crystal display panel according to claim 8,  
wherein said segment electrodes are formed directly on said first substrate, said insulating film is formed on said first substrate and at least on peripheral portions of said segment electrodes, and said auxiliary electrode is formed on said insulating film.  
25 10. A liquid crystal display panel according to claim 9, wherein said auxiliary electrode and said insulating film are in same planar pattern.

11. A liquid crystal display panel according to claim 8,  
wherein said auxiliary electrode is formed directly on said first  
substrate, said insulating film is formed on said first substrate within opening  
portions in said auxiliary electrode and at least on peripheral portions of said  
opening portions in said auxiliary electrode, and said segment electrodes are  
formed on said insulating film.

12. A liquid crystal display panel according to claim 11, wherein said  
segment electrode and said insulating film are in same planar pattern.

13. A liquid crystal display panel including a liquid crystal layer  
10 sandwiched between transparent first and second substrates, and a plurality of  
segment electrodes on said first substrate and an opposite electrode on said  
second substrate respectively, and performing a display by a change in a state  
of transmission, scattering or absorption of light which is made incident on  
said liquid crystal layer, caused by selectively applying voltage to said liquid  
15 crystal layer by means of said segment electrode and said opposite electrode,  
wherein an auxiliary electrode made of a transparent conductive film  
is provided over the entire region forming pixel areas and a background area  
on said first substrate, a transparent insulating film is provided on said  
auxiliary electrode, and said each segment electrode is provided on said  
20 insulating film, and  
wherein an overlap between said opposite electrode and said segment  
electrode forms said pixel area, and an overlap between said opposite  
electrode and a portion of said auxiliary electrode without said segment  
electrodes forms said background area.

25 14. A liquid crystal display panel according to claim 13, wherein said  
insulating film on said auxiliary electrode is removed at portions where said

segment electrodes are not provided.

15. A liquid crystal display panel according to claim 1,  
wherein a plurality of segment electrode terminals for individually  
applying external signals to said plurality of segment electrodes, and wiring  
electrodes for connecting said segment electrode terminals and said segment  
electrodes respectively are provided on said first substrate, and one end  
portion of each wiring electrode extends to a region where said segment  
electrode is formed,  
wherein a transparent insulating film is provided on said first  
substrate and said each wiring electrode, and said insulating film has an  
opening portion on said one end portion of said each wiring electrode, and  
wherein said each segment electrode and said auxiliary electrode are  
provided on said insulating film, and said each segment electrode and said  
each wiring electrode are connected through the opening portion in said  
insulating film.

16. A liquid crystal display panel according to any one of claims 1, 8,  
13 and 15, wherein a photovoltaic device is disposed outside said second  
substrate.

17. A liquid crystal display panel according to claim 2 or claim 15,  
wherein said wiring electrode has a plurality of holes.

18. A liquid crystal display panel according to any one of claims 2, 15  
and 18, wherein said segment electrodes and wiring electrodes are formed of  
a metal film.

19. A liquid crystal display panel according to any one of claims 1, 8,  
13 and 15, wherein said auxiliary electrode is split into a plurality of parts.

20. A liquid crystal display panel according to any one of claims 1, 8,

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~~13 and 15, wherein said opposite electrode is split into a plurality of parts.~~

21. A liquid crystal display panel according to claim 20, wherein gaps between said split opposite electrodes and gaps between said plurality of segment electrodes are provided at different positions in a plane view.